

Appl. No. 10/820,855
Amendment dated: February 26, 2008
Reply to OA of: August 27, 2007

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1(original). An under bump metallization structure applicable to be disposed on bonding pads of a semiconductor wafer, wherein a passivation layer covers the wafer and exposes the bonding pads, the under bump metallization structure comprising:

an adhesive layer formed on the bonding pads;

a first barrier layer disposed on the adhesive layer;

a wetting layer formed on the first barrier layer; and

a second barrier layer disposed on the wetting layer, wherein a material of the second barrier comprises tin and nickel.

2(original). The structure of claim 1, wherein the quantity of the tin is smaller than the quantity of the nickel.

3(previously presented). The structure of claim 1, wherein the first barrier layer comprises nickel-vanadium or nickel.

4(original). The structure of claim 1, wherein the wetting layer is a copper layer.

5(canceled).

6(previously presented). The structure of claim 1, wherein the adhesive layer comprises titanium.

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7(original). The structure of claim 1, wherein the thickness of the second barrier layer is ranged from about 50 μm to about 80 μm .

Claims 8-24(canceled).

25(new). A method for manufacturing an under bump metallization structure applicable to be disposed on bonding pads of a semiconductor wafer, wherein a passivation layer covers the wafer and exposes the bonding pads, comprising:

- forming an adhesive layer on the bonding pads;
- disposing a first barrier layer on the adhesive layer;
- forming a wetting layer on the first barrier layer; and
- disposing a second barrier layer on the wetting layer, wherein a material of the second barrier comprises a tin-nickel alloy.

26(new). The method of claim 25, wherein the quantity of the tin is smaller than the quantity of the nickel.

27(new). The method of claim 25, wherein the first barrier layer comprises nickel-vanadium or nickel.

28(new). The method of claim 25, wherein the wetting layer is a copper layer.

29(new). The method of claim 25, wherein the adhesive layer comprises titanium.

30(new). The method of claim 25, wherein the thickness of the second barrier layer is ranged from about 50 μm to about 80 μm .